Chromatographia Vol. 21, 1986 Contents

Vol.21, No.1, 1986

Originals

- Sampling Considerations in Supercritical Fluid Chromatography R.J. Skelton Jr. / C. C. Johnson / L. T. Taylor
- GC Determination of Traces of Acetaldehyde in Aqueous Matrix: A Rapid Headspace Method L. Gramiccioni/M. R. Milana / S. Di Marzio / S. Lorusso
- Determination of Vanadium, Cobalt, Copper, Zinc, and Cadmium in Biological Materials by a Combined Anion-Exchange-Spectrophotometric Method *T. Kiriyama/R. Kuroda*
- Application of Capillary Gas Chromatography for Physico-Chemical Measurements Particularly Considering the Influence of Adsorption on the Liquid Phase Tube Wall Interface V. G. Berezkin/A. A. Korolev
- Rapid Concentration of Organics from Aqueous Solutions Through Uncoated Capillary Columns: A New Approach to Purification and Ultratrace Analysis A. Zlatkis/S. Weisner/L. Ghaoui
- Compatibility and Universality of the Retention Prediction System for Polycyclic Aromatic Hydrocarbons in Reversed-Phase Liquid Chromatography K. Jinno / Y. Saigusa / M. Kuwajima / M. Atomura / M. Okamoto
- Improved HPLC for Triglycerides by Special Tempering Procedures 29 E. Frede
- Gas Chromatographic Analysis of Free Fatty Acids and Glycerides of Milk Fat Using Tetramethylammonium Hydroxide as Catalyste 37

 I. Martínez-Castro / L. Alonso / M. Juárez
- A Simple High-Performance Liquid Chromatographic
 Determination of Mexiletine in Human Plasma at
 Therapeutic Levels
 F. Susanto /S. Humfeld / H. Reinauer
- Headspace Methods for Volatile Components of Grapefruit-Juice 44 A.J. Núñez / H. Maarse
- Separation of Hordein Proteins from European Barley by High-Performance Liquid Chromatography: Its Application to the Identification of Barley Cultivars C. E. Wingad /M. Iqbal /M. Griffin /F. J. Smith

Vol. 21, No. 2, 1986

Originals

12

16

19

24

- The Estimation of Primary Aromatic Acids and Other Basic Nitrogen Compounds in Some Coal Liquefaction Products

 P. Burchill J. A. Herod J. C. A. Mitchell
- Thin-Layer Chromatography of Low-Molecular Epoxy Compounds After Derivatization with Picric Acid J. Urbański / W. Balasiewicz

67

83

95

- Cellulose Conformation Responsible for Resolution of DL-Amino Acids 79
 S. Yuasa | A. Shimada | M. Isoyama | T. Fukuhara | M. Itoh
- Porous Polymers Coated with Stationary Phases. Contribution of the Support to Retention Behaviour in Gas Chromatography. Chromosorb 102 Coated with Ethofat 60/25, Squalane and Fractonitril IV. Calculation of the Experimental Partition Constant

D. Barceló / M. T. Galcerán / L. Eek

- Relationship Between Thermodynamic Characteristics and Capacity Ratios Under LPTGC Conditions

 L. Podmaniczky / L. Szepesy / K. Lakszner / G. Schomburg
- Chromatography of Glycols. Regularities in the Retention of C₃-C₆ Branched Glycols in Gas-Solid and Gas-Liquid Chromatography

 A. M. Afanassiev | V. N. Demeshev | E. P. Kalyazin |
 G. V. Kovalev
- Chromatographic Behaviour of Alkyl-Bonded Phases:
 Separation of Barbiturates and Pyrazolones on Precoated
 Plates
 105
 M. Marichy / C. Gonnet / L. Zlatanov
- Gas Chromatographic Method for the Analysis of Nitrochlorobenzene Isomers 110 J. G. Mhalas / N. V. Rama Rao / M. Sriram

Vol.21, No.3, 1986

Editorial 135

Originals

- Optimization of a Reaction Detector for Analysis at the Femtomol Level of Carbamate Insecticides by HPLC

 130

 H. Engelhardt / B. Lillig
- Mass Overload in Preparative Liquid Chromatography:
 Choice of Column Dimensions and Optimum Working
 Conditions
 G. Cretier /J. L. Rocca
 143

	Gas Chromatographic Retention Indices for Alkenes on OV-101 and Squalane Capillary Columns S. Boneva /N. Dimov	149	Application of Combined Chromatographic Techniques in the Screening and Purification of Ecdysteroids M. Báthori / K. Szendrei / I. Herke	23
	Methodological Developments in Overpressured-Layer			
	Chromatography J. Vajda L. Leisztner J. Pick N. Anh-Tuan	152	Vol.21, No.5, 1986	
	Direct Alkylation of Carboxylic Acids in Aqueous		In Memoriam Prof. Dr. Wiktor Kemula	249
	Samples C. A. R. Skow/M. K. L. Bicking	157	Originals	
			Originals	
	Determination of Cyanogen and Cyanogen Chloride Using Gas Chromatography with a Flame Ionisation Detector	101	Headspace Analysis with Cryogenic Focusing: A Procedure for Increasing the Sensitivity of Auto-	
	P.N. Brown / G. G. Jayson / M. C. Wilkinson	161	mated Capillary Headspace Analysis P. L. Wylie	251
	The Effect of Hydrocarbon Chain Length and End- Capping on the Liquid Chromatographic Properties		Optimization of Stepwise Gradient Elution in Reversed- Phase Chromatography	
	of Stationary Phases Containing Bonded Nitrile Groups		W. Golkiewicz	259
	S.M. Staroverov G. V. Lisichkin E. L. Styskin	165	On Line Cas Character Line Assets	
	Gas Chromatographic Determination of Adsorption terms on Chromosorb 102 Coated with Squalane and		On-Line Gas Chromatographic Analysis of Light Fischer-Tropsch Synthesis Products R. Snel	265
	Fractonitril VI. Study of Adsorption Phenomena Using Porous Polymers Coated with Liquid Phases D. Barceló /M. T. Galcerán /L. Eek	169	Ethylene Oxide Pollution Evaluation Part II: Sampling on HBr-Treated Charcoal Tubes C. Lefevre P. Ferrari J. Delcourt J. P. Guenier J. Muller	269
	Thin-Layer Chromatography of Inorganic Ions on Polyethyleneimine Cellulose in Sulfuric Acid and Acid-Ammonium Sulfate Media	175	Identification of Naphtho [8.1.2 abc] Coronene in the	
	T. Shimizu E. Uehara M. Ohtani	273	Extract of Diesel Particulate Matter by Non-Aqueous Reversed-Phase Liquid Chromatography Coupled with UV Multichannel Detector K. Jinno J. C. Fetzer / W. R. Biggs	274
1	/ol.21, No.4, 1986		A Review of Direct Liquid Introduction Interfacing	
0	Priginals		for LC/MS Part I: Instrumental Aspects W. M. A. Niessen	277
	Determination of the Configuration of Histrelin, an LHRH Analog, by Chiral Capillary Gas		Short Communication	
	Chromatography C. J. Shaw M. L. Cotter	197	Quantitative Gas Chromatographic Analysis of	
	Ethylene Oxide Pollution Evaluation		Perhalogenated Compounds Using a Flame Ionization Detector	200
	Part I: Sampling with Active Charcoal Tubes G. Greff J. Delcourt J. P. Guenier B. Herve-Bazin J. Muller	201	A. L. Pires Valente M. C. A. de Souza C. H. Collins	288
	Optimization of Enantiomeric Separations with Chiral		Vol. 21, No. 6, 1986	
	Bonded Phases H. Engelhardt Th. König St. Kromidas	205	Originals	
	Studies of Adsorption and Solution of Acetylacetonates of Cr (III), CO (III) and Al (III) by Gas Chromatography	214	Cryofocusing in the Combination of Gas Chromato- graphy with Equilibrium Headspace Sampling B. Kolb/B. Liebhardt/L. S. Ettre	305
	J. Maslowska S. Starzyński		Determination of the Lipophilicity of Some Aniline	
	Correlation Between Retention Data of Polycyclic Aromatic Hydrocarbons and Several Descriptors in Supercritical-Fluid Chromatography K. Jinno M. Saito T. Hondo M. Senda	219	Derivatives by Reversed-Phase Thin-Layer Chromato-	312
	Triacetylcellulose on Silica Compared with Non-Dilute Triacetylcellulose I as a High-Performance Liquid	222	Mixed Mode Chromatography Via Column Switching for the Simultaneous HPLC Analysis of Ionic and Non-Ionic Nucleic Acid Constituents	317
	KH. Rimbock / M. A. Cuyegkeng / A. Mannschreck	223	Anne P. Halfpenny and Phyllis R. Brown	
	High-Performance Liquid Chromatographic Determination of Glaucine in Glaucium Flavum Crantz B. Pekić/Ž. Lepojević/B. Slavica/S. M. Petrović	227	Chiral Separation of Aminoalcohols by Ion-Pair Chromatography C. Petterson M. Josefsson	321
	On the Chromatography Mechanism of Reversed-Phase	229	Remarks on the Detection of Aza Arenes in Airborne Particulates R. Tomingas/W. Monch/U. Matthiesen	327

VOL

Demixing Effects in Thin-Layer Chromatography with NH ₂ -Modified Silica Gel Precoated Plates L. Zlatanov / C. Gonnet / M. Marichy	331	High-Performance Liquid Chromatographic Measure- ment of 8-Methoxypsoralen in Plasma F. Susanto/S. Humfeld/H. Reinauer/R. Meschig	443
Effects of Stationary-Phase Polarity on Retention in Reversed Bonded Phase HPLC Columns W. T. Cooper/Li-Ying Lin	335	Adsorption of n-Alkanes on a Graphitized Carbon Black and its Activation Products in Dry Air F. J. Lopez-Garzón/María Domingo-Garcia	447
A Review of Direct Liquid Introduction Interfacing for LC/MS Part II: Mass Spectrometry and Applications	342	Thiophenepropyltrichlorosilane as Chemical Modifier on Silicagel for Reversed Phase Chromatography Monica W. Ericsson / A. L. Colmsjö Immobilized Stationary Phase on the Basis of Poly-	451
W.M.A. Niessen		ethylene Glycol Cross-Linked with Pluriisocyanates of the Desmodur Type M. Horka / V. Kahle / K. Janák / K. Tesařík	454
Vol.21, No.7, 1986		Ion-Pair High-Performance Liquid Chromatography	
Originals		Separation of β-Endorphin-(6-17) from Fourteen Fragments	461
Cyano-Modified Pre-Coated Plates – a Medium Polar Modification for High-Performance Thin-Layer	175	P. S. L. Janssen / J. W. Van Nispen / P. A. T. A. Melgers / R. L. A. E. Hamelinck	
Chromatography W. Jost / H. E. Hauck / W. Fischer	375	Retention Behaviour in Micro-HPLC on Various Types of Glasses Modified with Phenyl Groups	467
Wine Analysis: Study and Comparison of Techniques Developed for the Study of Volatile Constituents	379	M. Okamoto / K. Jinno	
P. Etievant / H. Maarse / F. van den Berg		Linear Solvation Energy Relationships. A Comparison of Molar Volume and Intrinsic Molecular Volume as	
Determination of Retention Indices in LPTGC L. Podmaniczky / L. Szepesy / K. Lakszner / G. Schomburg	387	Measures of the Cavity Term in Reversed Phase Liquid Chromatography D. E. Leahy / P. W. Carr / R. S. Pearlman / R. W. Taft /	473
Synthesis and Evaluation of Selective Reversed Phase Packing Materials for HPLC A. L. Colmsjo / Monica W. Ericsson	392	M. J. Kamlet Short Communication	
Extrapolation and Interpolation of Gas Chromatographic Retention Times R. P. Kozloski	397	Low Temperature Liquid Chromatographic Separation of Oxygenated Terpenes from Terpene Hydrocarbons T. Yamasaki/M. Sakai/T. Kanamori/M. Sogo	478
Use of Diluted Anion-Exchange and Hydrophobic Properties in Separating Synthetic Single-Stranded			
Oligodeoxyribonucleotides on Mixed-Ligand Stationary Phases	402	Vol. 21, No. 9, 1986	
T.R. Floyd/L. W. Yu/R. A. Hartwick		Originals	
The Role of Electric Interaction in the Retention Index Concept Application of the Electric Interaction Indices to Quantitative Structure-Biological Activity Studies of Monomethylbenz(a)anthracenes		Direct Enantiomer Resolution of Primary, Secondary, and Tertiary Alcohols by Gas Chromatography on Chirasil-Val B. Koppenhoefer/H. Allmendinger	503
H. Lamparczyk / R. J. Ochocka Application of a Gas-Liquid Chromatography System		Reversed-Phase High-Performance Thin-Layer Chromatography of Hematoporphyrin and Its Nickel, Cooper and Zinc Complexes	509
with α-Cyclodextrin for Monitoring the Stereochemical Course of β-Pinene Hydrogenation T. Kościelski/D. Sybilska/S. Belniak/J. Jurczak	413	N. Suzuki / K. Saitoh / Y. Sugiyama Gas Chromatographic — Mass Spectroscopic Identifica-	
The Determination of Reducing Carbohydrates Using a Cation-Exchange Column and Potentiometric Detection with a Metallic Copper Electrode C.E. Cowie / P. R. Haddad / P. W. Alexander	417	tion of Volatile Oil Constituents of Omphalocarpus Procesum P. Parimoo / V. Ambujam	513
Vol. 21, No. 8, 1986		On-line Deproteinization of Serum Sample for HPLC Analysis of Hydrophilic Compounds and Its Application to Gentamicin G. Tamai / H. Imai / H. Yoshida	519
Originals			
Retention Behavior and Solvent Optimization of	435	Carbon Dioxide Supercritical Fluid Chromatography- Fourier Transform Infrared Spectrometry Ph. Morin/M. Caude/H. Richard/R. Rosset	523
Organochloride Pesticides in Solid-Phase Extraction E. B. Asafu-Adjaye / P. W. Kohler / S. Y. Su	433	Analysis of Some Organochlorine Pesticides in Seafood	
HPLC Analysis of the Large Polycyclic Aromatic Hydrocarbons in a Diesel Particulate J. C. Fetzer/W. R. Biggs/K. Jinno	439	Samples by Solid-Phase Extraction — Gas Chromato- graphy P. W. Kohler/S. Y. Su	53

0L.

VOL 21 198	
VOL 21 198	
198	
	ì
report Common Million and State of the Common	

Analysis of Free Carbohydrates in Milk Using Micro- packed Columns A. Olano/M. M. Calvo/G. Reglero	538	terephthalate) and Separation of Oligomers and Prepolymers K. Hibi/A. Wada/S. Mori	63
A Microcomputer-Assisted Retention Prediction with Gradient Elution in Reversed-Phase Liquid Chromato- graphy K. Jinno M. Kuwajima	541	Magnetic Field-Flow Fractionation Using Capillary Tubing S. Mori	64
Vol.21, No.10, 1986		Determination of Urinary 5-S-Cysteinyldopamine by High-Performance Liquid Chromatography with Electrochemical Detection	64
Editorial	559	S. Ito/T. Kato/K. Fujita	
Originals Selectivity Tuning of Serially Connected Open-Tubular (Capillary) Columns in Gas Chromatography.		The Determination of Lactate, Acetate, Chloride and Phosphate in an Intravenous Solution by Non-Suppressed Ion Chromatography P. R. Haddad / M. Y. Croft	64
Part 1: Fundamental Relationships J. V. Hinshaw Jr. / L. S. Ettre	561	Purification of CIS-Trimedlure Isomers by High- Performance Liquid Chromatography J.D. Warthen, Jr. / T. P. McGovern	65
Poly(vinylpyrrolidone)-coated Silica: A Versatile, Polar Stationary Phase for HPLC J. Köhler	573	Short Communication	
The Effect of Injection Procedures on Efficiency in Micellar Electrokinetic Capillary Chromatography D.E. Burton/M. J. Sepaniak / M. P. Maskarinec	583	Thin Layer Chromatographic Separation of a Few Food Dyes over Scolecite as a new Adsorbent P. K. Shrivastava/R. Prakash	65
Oxalate Ester Addition from a Solid Reagent Bed for Chemiluminescence Detection in HPLC J.R. Poulsen /J. W. Birks /P. van Zoonen /C. Gooijer /	587	Vol. 21, No. 12, 1986	
N. H. Velthorst / R. W. Frei		Originals	
Separation of Trimethylsilylated Oximes of Mono- saccharides by Capillary Gas-liquid Chromatography B. W. Li/K. W. Andrews	596	Selectivity Tuning of Serially Connected Open-Tubular (Capillary) Columns in Gas Chromatography. Part II: Implementation J. V. Hinshaw Jr. /L. S. Ettre	66
Short Communication Direct Fluorescence Detection of Non-Steroidal Anti- Inflammatory Agents Separated by TLC with 9-Iso- thiocyanatoacridine Derivatives	599	Gas Chromatography of Low Molucular Weight Halocarbons on Macroporous Silica Modified by a Thin Liquid Phase Film Yu. S. Nikitin/M. B. Viryasov	68
C. Sårbu/C. Mårutoiu/M. Vlassa 1986 Tswett Chromatography Medal Recipients Vol. 21, No. 11, 1986	601	Characterization of Chemically Bonded Phases on Precoated Thin-layer Plates by ²⁹ SI and ¹³ C Gross-Polarization and Magic-Angle Spinning NMR J. W. de Haan / L. J. M. van de Ven / G. de Vries / U. A. Th. Brinkman	68
Editorial	615	Measurement of Oleic Acid in Human Plasma by Isotope Dilution Mass Spectrometry F. Susanto/S. Humfeld/H. Reinauer	69
Originals Fundamental Conditions in Pressure-Programmed Supercritical Fluid Chromatography-Mass Spectro-		Unified Retention Index of Hydrocarbons Separated on Dimethylsilicone OV-101 S. Boneva / N. Dimov	69
metry and some Applications to Vitamin Analysis K. Matsumoto/S. Tsuge/Y. Hirata Computer Interactive Identification System for	617	Headspace Gas Chromatographic Determination of Ethylene Oxide in Air R. Binetti/S. Di Marzio/P. Di Prospero/L. Gramiccioni/	70
Polycyclic Aromatic Hydrocarbons in Reversed- Phase Microcolumn Liquid Chromatography K. Jinno /M. Kuwajima	622	G. Viviano/G. Ziemacki The Effect of Preanodization on the Electrochemical Detection of Oxprenolol in Plasma	70:
Control of Flow Rate in Supercritical Fluid Chromatography Y. Hirata/F. Nakata	627	M.R. Gregg Separation of Rhenium by Thin-Layer Chromatography With Polyethyleneimine Cellulose in Hydrochloric Acid Media	708
Rapid-Scanning Electrochemical Detector with Micro Working Electrode for Micro High-Performance Liquid Chromatography	631	T. Shimizu/S. Abe Short Communication	
M. Goto/K. Shimada Semi-Micro Size-Exclusion Chromatography:		Quantitative Analysis of Nicotine in Several Cigarette Brands, Available in Iran	711
Molecular-Weight Measurement of Poly(ethylene		A. Raisi / E. Alipour / S. Manouchehri	711

Abe, S.	708	Ericsson, M.W.	392, 451	Kahle, V.	454
Adlard, E.R.	239, 355, 546	Etievant, P.	379	Kaiser, R.E.	656
Afanassiev, A.M.	95	Ettre, L.S.	305, 561, 669	Kalyazin, E.P.	95
Alexander, P.W.	417			Kamlet, M.J.	473
Alipour, E.	711	Ferrari, P.	269	Kanamori, T.	478
Allmendinger, H.	503	Fetzer, J.C.	274, 439	Kato, T.	645
Alonso, L.	37	Fischer, W.	375	Kiriyama, T.	12
Ambujam, V.	513	Floyd, T.R.	402	Klaus, Lj.	115
Andrews, K.W.	596	Frede, E.	29	Kohler, J.	573
Angerer, J.	181	Frehse, H.	656	Kohler, P.W.	435, 531
Anh-Tuan, N.	152	Frei. R.W.	587	Kolb, B.	305
Asafu-Adjaye, E.B.	435	Fujita, K.	645	König, Th.	205
Atomura, M.	24	Fukuhara, T.	79	Koppenhoefer, B.	503
D-1-1-1-1-1	77	Galcerán, M.T.	83, 169	Korolev, A. A. Kosielski, T.	16 413
Balasiewicz, W.	77	Ghaoui, L.	19	Kovalev, G. V.	95
Barceló, D.	83, 169	Gołkiewicz, W.	259	Kozloski, R.P.	397
Bathori, M.	234	Gonnet, C.	105, 331	Kromidas, St.	205
Belniak, S.	413	Gooijer, C.	587	Kuroda, R.	12
Berezkin, V.G.	16	Goto, M.	631	Kuwajima, M.	24, 541, 622
Berridge, J.C.	713		9, 701	Kuwajiiia, M.	24, 341, 022
Bicking, M. K. L.	157	Gramiccioni, L.	201	Laborate V	01 207
Biggs, W. R.	274, 439	Greff, G.		Lakszner, K.	91, 387
Binetti, R.	701	Gregg, M.R.	705 49	Lamparczyk, H.	409
Birks, J.W.	587	Griffin, M.		Leahy, D.E.	473
Boneva, S.	149, 697	Grob, K.	420	Lefevre, C.	269
Bordás, B.	312	Guenier, J.P.	201, 269	Leisztner, L.	152
Braithwaite, A.	239		110 (10	Lepojević, Z.	227
Brinkman, U.A.Th.	687	Haddad, P.R.	417, 648	Li, B.W.	596
Brown, P.N.	161	Halfpenny, A.P.	317	Li-Ling, Lin	335
Brown, P.R.	317	Hamelinck, R.L.A.E.	461	Liebhardt, B.	305
Burchill, P.	67	Hartwick, R. A.	402	Lillig, B.	136
Burton, D.E.	583	Hauck, H.E.	375	Lisichkin, G.V.	165
		Hawk, G. L.	480	Lopez-Garzón, F.J.	447
Calvo, M.M.	538	Herke, I.	234	Lorusso, S.	9
Carr, P.W.	473	Herod, A.A.	67		
Caude, M.	523	Herve-Bazin, B.	201	Maarse, H.	44, 379
Collins, C. H.	288	Hibi, K.	635	Mannschreck, A.	223
Colmsjö, A. L.	392, 451	Hinshaw, J. V. Jr.	561, 669	Manouchehri, S.	711
Cooper, W.T.	335	Hirata, Y.	617, 627	Marichy, M.	105, 331
Cotter, M. L.	197	Hondo, T.	219	Martinez-Castro, I.	37
Cowie, C.E.	417	Horká, M.	454	Măruțoiu, C.	599
Cretier, G.	143	Humfeld, S.	41, 443, 693	Maskarinec, M.P.	583
Croft, M.Y.	648			Matsumoto, K.	617
Cserháti, T.	312	Imai, H.	519	Matthiesen, U.	327
Cuyegkeng, M.A.	223	Iqbal, M.	49	McGovern, T.P.	651
		Isoyama, M.	79	McKerrell, E.H.	. 420
Davies, I.W.	420	Ito, S.	645	Melgers, P. A. T. A.	461
de Haan, J.W.	687			Meschig, R.	443
de Souza, M.C.A.	288	Jack, D.B.	115, 355	Mhalas, J.G.	110
de Vries, G.	687	Jaeger, H.	355	Milana, M.R.	9
Delcourt, J.	201, 269	Janák, K.	454	Mitchell, C.A.	67
Demeshev, V.N.	95	Janssen, P.S.L.	461	Mönch, W.	327
Di Marzio, S.	9, 701	Jayson, G.G.	161	Mori, S.	635, 642
Di Prospero, P.	701	Jinno, K.	24, 219, 274,	Morin, Ph.	523
	149, 697		439, 467, 541,	Muller, J.	201, 269
Dimov, N.	447		622	Munson, J.W.	115
Domingo-Garcia, M.	77/	Johnson, C.C.	3		
Eak I	83 160	Josefsson, M.	321	Nakata, F.	627
Eek, L. Engelhardt, H.	83, 169	Jost, W.	375	Niessen, W. M. A.	277, 342
r ngemardt H	136, 181, 205,				
Ligomarot, in	420, 480, 656	Juárez, M.	37	Nikelly, J.	355

Nikitin, Yu.S.	681	Sahambura C	01 207		
Núffez, A.J.	44	Schomburg, G.	91, 387	Tomingas, R.	327
1401102, 78.3.		Scott, R.P.W.	480	Tsuge, S.	617
Ochocka, R.J.	409	Senda, M.	219		
Ohtani, M.	175	Sepaniak, M.J.	583	Uehara, E.	175
Okamoto, M.	24. 467	Sewell, P. A.	713	Urbański, J.	77
Olano, A.	538	Shaw, C.J.	197		
Olallo, A.	220	Shimada, A.	79	Vajda, J.	152
Parimoo, P.	513	Shimada, K.	631	van de Ven, L.J.M.	687
Pearlman, R.S.	473	Shimizu, T.	175. 708	van den Berg, F.	379
Pekić, B.	227	Shrivastava, P.K.	655	Van Nispen, J.W.	461
Petrović, S. M.	227	Skelton, R.J., Jr.	3	van Zoonen, P.	587
Pettersson, C.	321	Skow, C.A.R.	157	Velthorst, N. H.	587
Pick, J.	152	Slavica, B.	227	Viryasov, M. B.	681
Pires Valente, A. L.	288	Smith, F.J.	49, 239	Viviano, G.	701
Podmaniczky, L.	91, 387	Snel, R.	265	Vlassa, M.	599
Poulsen, J. R.	587	Sogo, M.	478		
Prakash, R.	655	Sriram, M.	110	Wada, A.	635
Flandsii, N.	033	Staroverov, S. M.	165	Warthen, J. D., Jr.	651
Date: 4		Stock, R.	181	Weisner, S.	19
Raisi, A.	711	Strimaitis, J.	480	Weiss, J.	181
Rama Rao, N. V.	110	Styskin, E. L.	165	White, C.M.	181
Regiero, G.	538	Su, S. Y.	435, 531	Wilkinson, M.C.	161
Reinauer, H.	41, 443, 693	Sugiyama, Y.	509	Wilson, I.D.	656
Richard, H.	523	Susanto, F.	41, 443, 693	Wingad, C.E.	
Rimböck, KH.	223	Suzuki, N.	509	Wylie, P. L.	49
Rocca, J. L.	143	Sybilska, D.	413	,	251
Rosset, R.	523	Szendrei, K.	234	Yamasaki, T.	470
e : v		Szepesy, L.	91, 387	Yoshida, H.	478
Saigusa, Y.	24	Szogyi, M.	312	Yu, L.W.	519
Saito, M.	219			Yuasa, S.	402
Saitoh, K.	509	Taft, R.W.	473	· 66.50, 5.	79
Sakai, M.	478	Tamai, G.	519	Zhu, P. L.	220
Sárbu, C.	599	Taylor, L.T.	3	Ziemacki, G.	229
Schaller, K.H.	181	Tesařík, K.	454	Zlatanov, L.	701
Schoenfeld, R.	546	Thier, HP.	656	Zlatkis, A.	105, 331
				The state of the s	19

V01

Chromatographia Vol. 21, 1986 Subject Index

Acetaldehyde, in aqueous foods	9	Epoxy compounds, picric acid derivatives of	f 77
Active carbon, HBr treated	269	Ethylene oxide in air	701
sampling	201, 269	 – sampling 	201, 269
Adsorption isotherms of acetylacetonates	214	Extraction, solid phase	435, 531
- on liquid phase in GC	16		
Airborne particulates	327	Fermi resonance bands in FTIR	523
n-Alkane adsorption, by GC	447	FID, of (CN)2 and CNCI	161
Aniline derivatives, lipophilicity of	312	Flame ionisation detection	288
Anion-exchange chromatography	12	Flavour and aroma analysis	251
, of hordein proteins	49	Fluorescence detection, in TLC	599
preconcentration	12	Free energy changes, in GC	102
- exchanger, chloride form	12		
, thiocyanate form	12	Gas chromatography, see GC	
Anions, in intravenous solutions	648	GC, and surface area	169
Aromatic amines, GC-MS of	67	-, capillary	265, 305, 454, 669
Autoxidation, of dopamine	645	-, -, chiral	197
		-, -, for physico-chemical measurements	16
Barley cultivars, identification of	49	-, -, of alcohols	503
Baseline stabilisation, in LC	29	-, -, - essential oils	513
Basic N compounds, GC-MS of	67	-, -, - grapefruit volatiles	44
Bonded phases, characterisation of	687	-, -, - monosaccharides	596
, in capillary GC	16	-, -, - wine volatiles	319
		-, -, selectivity in	561
Capacity ratios, in GC	91	-, headspace	701
Capillaries, PEG coated	454	GC-MS	693
-, serially connected	669	, of aza arenes	327
Capillary columns, combined	561	, - omphalocarpus oils	513
, uncoated for concentration	19	, - primary aromatic amines	67
- gas chromatography - see GC, capillary	4.7	-, of acetaldehyde	9
- LC, electrokinetic	583	-, - alkenes	149
Carbohydrates in milk	538	-, - carbohydrates in milk	
Carbon dioxide extracts	3	-, - carbonydrates in milk	538
- fibre electrode	631		157
Carboxylic acids, direct alkylation of	157	-, - (CN) ₂ and CNCl	161
Cation-exchange, of carbohydrates	417	-, - ethylene oxide	201, 269, 701
Cavity term, in LC	413	-, - extract of diesel particulate matter	274
Cellulose columns	79	-, - fatty acids	37, 513
- layers for chiral resolution	79	-, - Fischer-Tropsch products	265
Chemiluminescence detection, in LC	587	-, - glycerides of milk	37
Chiral GC	197	-, - glycols	95
		-, - halocarbons	681
- separation Coal extracts	321	-, - hydrocarbons	697
	3	-, - metal acetylacetonates	214
- liquefaction products, GC of	67	-, - micotine	711
Coffee extracts	3	-, - nitrochlorobenzene isomers	110
Computer interactive identification	622	-, - oleic acid	693
Concentration on uncoated capillaries	19	-, - organochlorine pesticides	531
Cross-linked phases, in GC	16	 perhalogenated compounds 	288
polyurethane, in capillary GC	454	-, - pinane	413
Cryogenic focussing	251	-, - β-pinene	413
α-Cyclodextrin as GC stationary phase	413	-, - terpenes	513
		 on chiral polysiloxane 	503
Deproteinisation, on-line	519	 –, – coated porous polymers 	169
Droplet counter-current chromatography	234	-, - micro-packed columns	538
		 –, – modified silica 	681
Ecdysteroids, chromatography of	234	-, quantitative analysis	67
Electrochemical detection, in LC	645, 705	-, selectivity tuning in	669
- detector	631	 study of adsorption 	169
Enantiomeric separations, optimisation of	205	GC, temperature-programmed	91
- alcohols, GC of	503	Gram-Schmidt reconstruction	527
- resolution, by GC	503	Craphiticad anghor blast	
resolution, by GC	303	Graphitised carbon black	447

VOL. 21 1986

VOI

198

2

SEC, of oligomers and prepolymers	635	-, gradient elution in	152
Selective derivatisation, of coal products	67	-, instrumentation for	152
Selectivity tuning, in GC	561	-, of alkaloids	375
SFC	2, 219, 523	-, - amino acids	375
-, control of flowrate in	627	-, - DL-amino acids	79
FTIR	523	-, - aniline derivatives	312
- · MS, pressure programmed	617	-, - anti-inflammatory agents	599
-, of vitamins	617	-, - barbiturates	106
-, pressure programming	627	-, - ecdysteroids	234
-, sampling for	3	-, - epoxycompounds	77
Silica gel, cyano-modified	375	-, - food dyes	655
, modified for LC	392	-, - hematoporphyrin complexes	509
, silane-modified	451	-, - inorganic ions	175, 708
-, macroporous in GC	681	-, - pyrazolones	105
-, poly(vinylpyrrolidone)-caoted	573	-, - rhenium (VII)	708
Size-exclusion chromatography - see SEC		-, - steroids	375
Sodium decyl sulphate, mobile phase	583	-, on alkyl-bonded layers	105
Solvation energy, in LC	473	-, - bonded phases	687
Solvent peak	3	-, - cyano-modified layers	375
Stationary phase polarity, LC	335	-, - NH ₂ -silica	331
Stepwise elution, optimisation	259	-, - polyethyleneimine	175
Structure-bio-activity relation	409	-, cellulose	708
Supercritical CO ₂	3, 523	-, - scolecite	655
 fluid chromatography – see SFC 		-, overpressured	152
Surface area, by GC	447	-, retention volumes in	259
- heterogeneity, of carbon black	447	-, with ion-pair reagents	375
		TLC, with H ₂ SO ₄ -sulphate media	175
Temperature gradients, in LC	29	Triacetylcellulose-coated silica, structure of	223
Tenax trapping, in headspace analysis	44	Trimedlure, LC of	651
Tetramethylammonium hydroxide catalyst	37	Trimethylsilylated oxime derivatives	596
Thermodynamic characteristics in GC	91		550
- properties, by GC	214	Urine analysis	157
Thin-layer chromatography - see TLC			
Thiophenepropyltrichlorosilane modifier in LC	451	Water pollution	681
TLC, demixing effects in	331	Wine analysis, comparison of techniques	379
		, and the state of	

Chromatographia Vol. 21, 1986 Key Word Index

Acetaldehyde	9	- polysiloxane	503
Acetate, lactate, chloride and phosphate	648	- separation	321
Activated charcoal adsorption	701	Chloro- and methylphenols	259
Active charcoal tubes	201	Cigarette	711
Adsorption isotherms	214	Clin-Elut TM	41
- phenomena	169	Coal liquefaction products	67
Alcohols	503	Coated porous polymers	83, 169
n-Alkane adsorption	447	Column combination	561, 669
Alkenes	149, 265	- liquid chromatography	12, 24, 29,
Alkyl-bonded silica	105	oquia vinantianography	49, 79, 136,
substituted phenols	165		165, 205, 223,
Alkylation	157		227, 229, 259,
Alumina PLOT columns	265		274, 317, 327,
Amino-bonded silica	331		392, 402, 439,
Aminoalcohols	312		467, 473, 478,
Analysis of vitamins	617		519, 541, 573.
- water pollutants	681		587, 645, 648,
Aniline derivatives	312		651
Anion-exchange	12	- switching	317
preconcentration	12	Comparison of data	149
Anti-inflammatory agents	599	Compatability	24
Anti-epileptic drugs	467	Computer interactive identification system	622
Applications	342	Concentration effects	18
Aqueous foods	9	Copper electrode	417
Autoxidation	645	Crosslinked phases	16
Aza arenes	327	- polyurethane	454
		Cryogenic focussing	251
Barbiturates	105	- trapping	305
Barley proteins	49	Cyanogen	161
Behaviour of metal acetylacetonates	214	- chloride	161
Biological standard reference materials	12	Cyano-modified layers	375
Bonded phases	16, 392	Cyclodextrin	
- stationary phases	467	Cysteinyldopamine	413
Butyl Toyopearl 650-M	519	Cystemytopanine	645
	313	Demixing effects	221
C1-C4 hydrocarbons	265	Desolvation	331
C3-C6, Glycols, branched chain	95	Determination of D-glaucine	277
Calculation of kpT for LPTGC	91		227
IpT	387	Diaphragm	277
Capacity factor	435	Diesel particulate extract	439
Capillary columns	305, 454, 669	Direct liquid introduction DL-amino acids	277, 342
- gas chromatography	16. 44. 265.		79
Sectionary	379	Droplet counter-current chromatography	234
Carbamate insecticides	136	Drug monitoring	41
Carbohydrate quantification	538	Effect of metallic salts	212
Carbon fiber working electrode	631	Efficiency	312
Carbowax-type stationary phase	454	Electrochemical detection	583
Carboxylic acids	157	Electrokinetic capillary chromatography	645, 705
Catecholamine analysis	631	Enantiomers	583
Cavity term	473		223
Cellulose conformation	79	β-Endorphin-(6-17)	461
Ceratitis capitata	651	Epoxides Ethylene oxide	77
Chemical ionization	342		201, 269
- reaction detector	136	- in air	701
Chemically bonded phases	687	Examination by Si and C NMR	687
- modified silicas	165	Fatta maide	
Chemiluminescence detection	587	Fatty acids	513
Chiral capillary gas chromatography	197	Fermi resonance bands	523
- characterization	197	Fischer-Tropsch products	265
- phases	205	Flame ionisation detection — detector	161
	203	detector	288

681

681

642

143

251

627

599

655

523

503

Medfly

Metalloporphyrins

Methylation methods

Micropacked column

Ouinone detection

Reducing carbohydrates

Rapid scanning electrochemical detector

Micro high-performance liquid chromatography 631

Methyl silicones

Mexiletine

Micelles

651

509

697

693

41

157

538

587

631

417

Flavour and aroma analysis

Fourier transform infrared spectrometry

Flow control Fluorescence detection

(FTIR)

Gas capillary columns

Low boiling halocarbons

Magnetic field-flow fractionation

Macroporous silica

Mass overload

Food dyes

Relative retention	409	Supercritical CO2 extraction	3
volumes, correlation of	95	 fluid chromatography 	3, 219, 523,
Resolution of enantiomers	503		627
Retention	229	mass spectrometry	617
 by Polysorb, PEG and Tween 	95	Surface areas	169, 447
- indices	149	 heterogeneity 	447
 – (I_{PT}) in LPTGC 	387	Suspended particulate matter	327
 prediction system 	24, 219, 541,		777
	622	Temperature gradients	29
 time extrapolation 	396	Tenax TA trapping	44
 interpolation 	396	Thermal desorption	44
Re(VII) separation	708	Thermodynamic characteristics	91
Reversed-phase	24, 49, 229,	Terpene hydrocarbons	478
	259	Terpenes	513
capacity factors	173	Tetramethylammonium esters	37
gradient elution	541	Theory	561
liquid chromatography	622	Thin-layer chromatography	77, 79, 105,
RI-detection	29		175, 234, 312,
			331, 375, 509,
Sample preparation	435		599, 655, 687,
Scolecite	655		708
Seeds	513	Thiocyanate system	12
Selective derivatisation	67	Tobacco	711
Selectivity	229	Triacetylcellulose, non-dilute	223
- tuning	561, 669	- on silica	223
Semi-micro size-exclusion chromatography	635	Triglyceride analysis	29
Separation of 49 inorganic ions	708	Trimedlure	651
- isomers	651	Trimethylsilylated oxime derivatives	596
 polar compounds 	573	Trace analysis	305
proteins	573	- organics	19
Silica-adsorbent modifications	681		1.7
- gel columns at low temperatures	478	Uncoated capillary columns	19
Single component mobile phase	29	Unified retention index	697
Solid-phase extraction	435, 531	Urine analysis	157
- reagent bed	587		101
Solvent optimization	435	Wine volatiles	379
Specific selectivity	392	Working condition selection	143
Stationary phase-solute interactions	409	The state of the s	143
Stereoselectivity	413	X-ray diffraction	223
Structure-biological activity relationships	409	,	663
Sulfuric acid-sulfate media	175	Z-glycyl-L-proline	321

V01 2 VOL.